Claims:

1.   A Web service providing system comprising a server unit for providing Web services through a network, said server unit comprising:

5   control means for acquiring an object call request received through said network and a user identifier and causing the acquired object call request to be stored and for comparing access authority specified by said user identifier and an access authority set for all methods which may be called by a request object; and

a storage section for storing execution results for a previously executed object;

10   wherein, if said storage section stores execution results for said request object previously executed, said control means transmits the execution results for said stored previous request object outside said server unit through said network, prior to executing said request object.

15   2.   The Web service providing system according to claim 1, wherein, if the access authority specified by said user identifier is contained in said access authority set, said control means causes said storage section to be searched.

3.   The Web service providing system according to claim 1, wherein said

20   server unit further comprises object execution means and wherein, if said storage section contains no corresponding previous execution results, said control means sends said object call request to an object executor to cause it to execute said request object.

4.   The Web service providing system according to claim 3, wherein said

25   server unit consists of an edge server comprising said control means and an application server comprising said object executor.

5.   A server unit for providing Web services through a network, said server unit comprising:

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control means for receiving an object call request and causing it to be stored and for comparing access authority for a request object and an access authority set for all methods which may be called by the request object; and

a storage section for storing execution results for a previously executed object;

5   wherein, if said storage section stores execution results for said request object previously executed, said control means transmits the execution results for said stored previous request object outside said server unit through said network, prior to executing said request object.

10   6.   The server unit according to claim 5, wherein, if the access authority specified by said user identifier is contained in said access authority set, said control means causes said storage section to be searched.

        7.   A server unit for providing Web services through a network, said server
15 unit comprising:

object analyzer means for acquiring all methods which may be called by a request object to generate an access authority set;

object execution means for executing said request object; and

a cache mechanism configured to comprise a storage section which stores
20 execution results for a previous object and using said access authority set to perform access control on said storage section in response to said object call request.

        8.   The server unit according to claim 7, wherein said cache mechanism is configured to comprise:

25   a request manager; and

an access controller for controlling a search for execution results for a previous request object stored in said storage section.

        9.   The server unit according to claim 8, wherein said access controller
30 compares access authority for said request object and said access authority set to perform access control; and

wherein, in response to said access controller's determination, said request manager passes said object call request to said object executor to control execution of said request object.

10. The server unit according to claim 7, wherein said object analyzer means further comprises:

means for acquiring a method which may be called by said object from object code;

means for acquiring access authority corresponding to said method; and

means for generating said access authority set from access authority for all methods which may be called by said object and causing it to be stored.

11. The server unit according to claim 7, wherein said server unit is configured to comprise an edge server comprising said cache mechanism and an application server comprising said object analyzer means.

12. A server control method for causing a computer system to function as a server unit for providing Web services through a network, said method causes said computer system to perform the steps of:

receiving and storing an object call request;

acquiring access authority for a request object from memory;

reading an access authority set for execution of said request object from the memory;

determining whether said access authority is contained in said access authority set; and

if said access authority is contained in said access authority set, prior to executing said request object, searching a storage section which stores execution results for a previous object.

13. The method according to claim 12, causing said computer system to perform the step of, if said storage section stores execution results for a request object

previously executed, transmitting the execution results for said stored previous request object outside said server unit through said network, prior to executing said request object.

5   14.   The method according to claim 12, causing said computer system to perform the step of, if said storage section stores no execution results for a request object previously executed, passing said object call request to an object executor.

       15.   A program for causing a computer system to function as a server unit for
10   providing Web services through a network, said program causes said computer system to perform the steps of:
              receiving and storing an object call request;
              acquiring access authority for a request object from memory;
              reading an access authority set for execution of said request object from the
15   memory;
              determining whether said access authority is contained in said access authority set; and
              if said access authority is contained in said access authority set, prior to executing said application, searching a storage section which stores execution results for a previous
20   object.

       16.   The program according to claim 15, causing said computer system to perform the step of, if said storage section stores execution results for a request object previously executed, transmitting said searched execution results outside said server unit.

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       17.   The program according to claim 15, causing said computer system to perform the step of, if said storage section stores no execution results for a request object previously executed, passing said object call request to an object executor.

18.   A computer-readable storage medium which stores a program for causing a computer system to function as a server unit for providing Web services through a network, said program causes said computer system to perform the steps of:

receiving and storing an object call request;

5   acquiring access authority for a request object from memory;

reading an access authority set for execution of said request object from the memory;

determining whether said access authority is contained in said access authority set; and

10   if said access authority is contained in said access authority set, prior to executing said application, searching a storage section which stores execution results for a previous object.

19.   A program for causing a computer system to function as a server unit for
15   providing Web services through a network, said program causes said computer system to perform the steps of:

reading from memory an access authority set generated from access authority for all methods which may be called by a request object; and

using certain access authority for said request object and said access authority set
20   to control access to previous execution results for an object stored in a storage section.

20.   A computer-readable storage medium which stores a program for causing a computer system to function as a server unit for providing Web services through a network, said program causes said computer system to perform the steps of:

25   reading from memory an access authority set generated from access authority for all methods which may be called by a request object; and

using certain access authority for said request object and said access authority set to control access to previous execution results for an object stored in a storage section.